

10/541016
JC17 Rec'd PCT/PTO 28 JUN 2005

The listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended). A sintered metal rotor of a rotary piston pump, in particular a rotary piston pump for generating a vacuum of a vacuum brake booster of a motor vehicle, where the brake booster can be connected to a vacuum pump intake connection, with a pot-shaped base body (1) and a bearing journal element which protrudes centrally from the bottom of this base body (1) from a cylindrical foot area coming directly out of the bottom and a connecting claw section (2) to be connected to it for a coupling element to be attached, ~~characterized by~~ comprising the features

- the connecting claw section (2) is designed in the form of two protruding individual webs (3),
- the individual webs (3) are diametrically opposed in the outside circumferential area of the cylindrical base section in

an area limited to max. 100° at the circumference and radially to

max. 25% of the diameter of the cylindrical base section,

- the two connecting claw individual webs (3) are press-sintered

by sintering compression rams that are designed based on the

cross-sectional area and are separately operable by the other

sintering compression rams that are necessary to create the

rotor.

Claim 2 (currently amended). The rotor according to Claim 1, ~~characterized in that~~ wherein the two individual webs (3) have the same size and shape.

Claim 3 (currently amended). The rotor according to Claim 1 or 2, ~~characterized in that~~ wherein the circumferential area assumed by an individual web (3) is limited to max. 90°.

Claim 4 (currently amended). The rotor according to ~~one of~~ the preceding claims Claim 1, ~~characterized in that~~ wherein the area assumed radially by the individual webs (3) is limited to

max. 20% of the cylindrical base section.

Claim 5 (currently amended). The rotor according to ~~one of the preceding claims~~ Claim 1, characterized in that wherein the individual webs (3) of the connecting claw section are case-hardened in edge profiles.

Claim 6 (currently amended). The rotor according to ~~one of the preceding claims~~ Claim 1, characterized in that wherein the case-hardening in edge profiles is inductively generated.

Claim 7 (currently amended). The rotor according to ~~one of the preceding claims~~ Claim 1, characterized in that wherein the edge-hardened area is shock cooled.

Claim 8 (currently amended). The rotor made of as the sintered metal according to ~~one of the preceding claims~~ Claim 1, characterized in that wherein the individual webs (3), including at least one transitional area directly adjacent in the direction of the rotor base body, contain copper that has been infiltrated subsequently into the pressed sintered structure.

Claim 9 (currently amended). The rotor according to Claim 8, ~~characterized in that~~ wherein a single web (3) enriched with copper has a specific gravity of at least 7.5 g/cm³.

Claim 10 (currently amended). The rotor according to Claim 9, ~~characterized in that~~ wherein the specific gravity is greater than 7.8 g/cm³.

Claim 11 (currently amended). The rotor according to Claim 10, ~~characterized in that~~ wherein the specific gravity is at least 7.9 to 8.0 g/cm³.

Claim 12 (currently amended). A sintered coupling element of a rotor according to ~~one of the preceding claims~~ Claim 1, ~~characterized in that~~ wherein the coupling element has a cross section that has been adapted to the development of the connecting claw section (2) with a rod-shaped torque abrasion area in the form of an elongated web (10).

Claim 13 (currently amended). A method for producing a rotor according to ~~one of the preceding claims~~ Claim 1,

~~characterized in that~~ wherein separate rams assigned to the individual webs (3) according to cross section are provided with a separate pressure acting on them in a sintering compression mold for producing the sintered rotor.

Claim 14 (currently amended). The method for manufacturing a rotor according to ~~one of Claims 8 through 11 in particular with a method according to~~ Claim 13, ~~characterized in that~~ wherein copper that is present in infiltrated form at least in the individual webs (3) penetrates out of a superficially copper layer applied at least to the individual webs (3) and into the sintered structure during the sintering heat treatment.